

Non-Confidential Technology Disclosure

TITLE: **Inhibiting Collagen-Induced Platelet Aggregation and Activation with Peptide Variants**

INVENTOR: **Alexander B. Sigalov, Ph.D.**
Department of Pathology, University of Massachusetts Medical School

DESCRIPTION:

This invention describes novel inhibitors of platelet collagen receptor glycoprotein VI (GPVI). The inhibitors include, but are not limited to, peptides, peptide variants and peptide-mimicking compounds that could be used in the treatment and/or prevention of diseases or other medical conditions involving collagen-induced platelet activation and aggregation. Examples of the aforementioned diseases are atherosclerosis and coronary artery disease, diabetes mellitus, renal disease, inflammatory diseases and others. The selective inhibition of the GPVI receptor and/or its signaling is predicted to inhibit thrombosis without affecting hemostatic plug formation. Thus, in contrast to antithrombotic drugs that are currently in use, GPVI receptor-specific inhibitors represent an ideal class of clinically suitable antithrombotics that would not induce significant bleeding side effects. The current state of the art suggests using GPVI antibodies as therapeutic agents. However, there are many disadvantages associated with antibody therapy, including the high cost of production, storage and administration as well as possible product contamination. Dr. Sigalov proposes novel GPVI receptor-targeting inhibitors that have multiple advantages when compared to antibodies.

APPLICATION: *This technology may be used for:*

- Treatment and prevention of diseases involving platelet activation and aggregation
- Production of drug-eluting medical devices such as cardiovascular stents
- Rational GPVI receptor-targeting platelet inhibitor design and optimization
- GPVI receptor-targeting drug delivery via conjugation of second therapeutic agent with compounds of this invention

ADVANTAGES: *This invention is advantageous as the peptide variants:*

- Avoid the dangerous side effects that can occur with other antithrombotic drugs
- Are potent, specific and have few toxicological side effects
- Can be readily used in antithrombotic-coated stents and other medical devices
- Can be made protease-resistant
- Do not accumulate in organs
- Do not suffer from drug-drug interactions

Patent Status: US 12/001,258 and PCT PCT/US2007/025389 patent applications were filed on 12/11/2007 and 12/12/2007, respectively, claiming a priority to US 60/874,694 provisional patent application filed on 12/13/2006

Licensing Status: Available for License

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Contact: Anita L. Ballesteros, Ph.D.
Licensing Officer
Phone: 508-856-6611
E-mail: Anita.Ballesteros@umassmed.edu